

Fact Sheet



For Draft/Proposed Significant Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

This Fact Sheet serves to address the changes specific to this Significant Modification, and shall be considered a supplement to the Fact Sheet corresponding with the Title V operating permit issued on December 30, 2008.

Permit Number: **R30-06500001-2008**
Application Received: **August 2, 2012**
Plant Identification Number: **03-54-065-00001**
Permittee: **U.S. Silica Company**
Facility Name: **Berkeley Springs Plant**
Mailing Address: **P.O Box 187, Berkeley Springs, WV 25411**

Permit Action Number: *SM01* Revised: *Draft/Proposed*

Physical Location:	Berkeley Springs, Morgan County, West Virginia
UTM Coordinates:	739.59 km Easting • 4,393.48 km Northing • Zone 17
Directions:	Off of Route 522 approximately 3 miles north of Berkeley Springs.

Facility Description

Sandstone mining, quarrying, and processing facility. SIC Code - 1446.

Emissions Summary

The proposed changes will result in a 0.57 tpy decrease in potential PM₁₀ emissions. Prior to this significant modification the PTE for PM₁₀ was 1,036.4 TPY (*cf.* Fact Sheet for minor modification MM01).

No other emissions changes are associated with this permitting action.

Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit 1,035.83 tpy of PM₁₀ and 267 tpy of SO₂. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, U.S. Silica Company is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR7	Control of PM from Manufacturing Sources
	45CSR13	Construction/modification permits
	45CSR16	NSPS Requirement
	45CSR30	Operating permit requirement.
	40 C.F.R. 60 Subpart OOO	NSPS for Non-metallic mineral processing
State Only:	None	

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R13-2145C	October 22, 2012	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

Determinations and Justifications

- I. **45CSR7 – To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations.** The proposed equipment meet the definition of a “manufacturing process” in 45CSR§7-2.20. The proposed equipment are subject to the following requirements in the rule:
- a. **45CSR§7-3.1. Opacity standard.** The 20% opacity limit for “source operations” as defined under 45CSR§7-2.38. is applicable to the proposed new bucket elevators BE01, BE02, and load out spout LS01. Compliance with the opacity limit in proposed conditions 5.1.7.1.b. and d. will ensure compliance with 45CSR§7-3.1.; consequently, a streamlining note has been added to the conditions. Similarly, the same standard and streamlining are applicable to Building #7 in conditions 5.1.7.2.b. and 5.1.7.2.d.
 - b. **45CSR§7-4.1. Weight emission standard.** The bucket elevators BE01, BE02, and load out spout LS01 meet the definition of Type ‘a’ source operations under 45CSR§7-2.39. According to the application, the maximum throughput is 150 ton/hr (300,000 lb/hr). From Table 45-7A of the rule, the PM limit for each emission unit is 40 lb/hr. Based on the filter volumetric flow rate of 450 ft³/min, compliance with the limit in condition 5.1.7.1.c. will ensure compliance with 45CSR7. The maximum aggregate particulate matter emission rate from stack #6 is 0.057 lb/hr, which is significantly less than the 45CSR7 limit. A streamlining note has been added to condition 5.1.7.1.c.
 - c. **45CSR§7-5.1. Control of fugitive particulate matter.** This section of the rule states that each manufacturing process that generates fugitive particulate matter must include a system to minimize such emissions. The proposed new bucket elevators BE01 and BE02 are sources of fugitive PM. This is determined from the fact that the bucket elevators are listed in NSR permit R13-2145C, condition 4.1.1.a. and the citation for that specific NSR permit requirement is 45CSR§7-5.1. Since BE01 and BE02 are manufacturing process sources of fugitive PM, this section is applicable to them. The sources will meet the requirement by utilization of a fabric filter in accordance with R13-2145C, condition 4.1.1.a. Proposed permit condition 5.1.7.1.a. sets forth this applicable requirement. Similarly, load out spout LS01 is a manufacturing process that generates fugitive PM, and is controlled by a fabric filter in combination with the dust suppression hopper (DSH). This section is applicable to LS01, and proposed permit condition 5.1.7.1.a. sets forth this applicable requirement.
- II. **NSR Permit R13-2145C.** The limitations and standards of this NSR permit affect Title V permit section 5.1.7. Associated underlying MRR requirements affect conditions in operating permit subsections 5.2. through 5.5. The NSR permit was changed from the old format (e.g., conditions A.1., B.1., etc.) to the new format that is like the Title V permit (e.g., conditions 4.1.1., 5.4.1., etc.). The language of conditions A.1. through A.5. of R13-2145B was replaced by the requirements of 4.1.1. and 4.1.2. of R13-2145C. In general, the requirements of R13-2145B will be removed, and the requirements of R13-2145C will be written in the modified permit. Thus, the following changes are made in the operating permit:
- a. Underlying requirement 4.4.1. is identical to Title V permit condition 3.4.1. Therefore, this underlying requirement will be cited with the Title V condition and include a parenthetical listing of equipment affected by this requirement, which are taken from section 1.0 of R13-2145C.
 - b. The language of current Title V condition 5.1.7.1. is stricken and replaced with the requirements of R13-2145C, condition 4.1.1. Requirement 4.1.1.c. gives a limit of 0.14 gr/dscf, which is incorrect by a factor of ten. This limit has been changed in Title V condition 5.1.7.1.c. to match Table 2 of 40 C.F.R. 60 Subpart OOO for affected facilities that commenced construction, modification, or reconstruction after 4/22/2008.

- c. The language of current condition 5.1.7.2. is stricken and replaced with the requirements of R13-2145C, condition 4.1.2.
 - i. Requirement 4.1.2.b. cites “40CFR§60.672(a) & Table 3 of Subpart OOO”. However, the requirement pertains to fugitive emissions, which are covered by §60.672(b). Thus, the citation will be changed from §60.672(a) to §60.672(b) in the Title V permit.
 - ii. Requirement 4.1.2.c. gives a limit of 0.14 gr/dscf, which is incorrect. The requirements is a stack emission limit for a source that commenced construction after 8/31/1983 but before 4/22/2008. Further, the rotex screens are not being modified as part of this permitting action. Therefore, the limit is 0.022 gr/dscf. This limit has been changed in Title V condition 5.1.7.2.c. to match item #1 in Table 2 of 40 C.F.R. 60 Subpart OOO.
- d. The language of current condition 5.1.7.3. is stricken and replaced with the requirements of R13-2145C, condition 4.1.3. Since this requirement applies only to control devices listed in R13-2145C, those affected control devices are specified in the Title V condition 5.1.7.3.
- e. The language of current conditions 5.1.7.4. and 5.1.7.5. is stricken.
- f. Condition 5.2.5. has been written to set forth requirement 4.2.1. of R13-2145C. In the fifth sentence of the condition, the reference to 40 C.F.R. §60.674(b) is corrected to 40 C.F.R. §60.676(b). Finally, the NSPS citation of authority in the underlying permit is corrected for the Title V permit.
- g. Condition 5.3.2. has been written to set forth requirement 4.3.1. of R13-2145C.
- h. Condition 5.3.3. has been written to set forth requirement 4.3.2. of R13-2145C.
- i. Condition 5.3.4. has been written to set forth requirement 4.3.3. of R13-2145C.
- j. Condition 5.3.5. has been written to set forth requirement 4.3.4. of R13-2145C. The citation of authority in the operating permit will include §60.672(b) since this is the specific applicable section of the regulation that requires compliance with requirements in Table 3 of Subpart OOO.
- k. The language of current condition 5.4.5. is stricken and replaced with the requirements of R13-2145C, condition 4.2.2.
- l. The language of current condition 5.4.6. is stricken and replaced with the requirements of R13-2145C, condition 4.4.2. The language “of the current version of R13-2145” is added, and the affected control devices are specified following the revised citation of authority.
- m. New condition 5.4.15. has been written to set forth requirement 4.4.3. of R13-2145C. The language “of the current version of R13-2145” has been added, and the affected control devices are specified following the citation of authority.
- n. Condition 5.5.3. has been written to set forth requirement 4.5.1. of R13-2145C. The language “of the current version of R13-2145” is added because there are no notification requirements in the operating permit like those specified in 2.18. of the underlying permit. Moreover, the fact that this specific requirement supersedes 2.18. makes it unnecessary to have an operating permit condition like 2.18.; thus, the added language is accurate and sufficient for incorporating this requirement into the Title V permit.
- o. Condition 5.5.4. has been written to set forth requirement 4.5.2. of R13-2145C. The reference to “Section 4.3.” in the underlying permit is changed to “conditions 5.3.2., 5.3.3., 5.3.4., and 5.3.5.” for incorporation into the Title V permit.

III. **40 C.F.R. Part 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants.** The applicable requirements of this regulation for the affected sources under this permitting action have been incorporated into the Title V permit via the underlying NSR permit R13-2145C.

IV. **45CSR16 – Standards of Performance for New Stationary Sources.** This applicable rule was not cited in the NSR permit conditions that set forth NSPS Subpart OOO requirements. The citation is added where appropriate in the modified Title V permit.

V. **Miscellaneous Changes.**

- a. Condition 3.3.1.d. has been added to the permit to match current standard Title V permit requirements. The citation of authority is modified as well for this language change.
- b. The citation “45CSR§30-5.1.c.” is added to existing permit conditions that set forth applicable requirements of 40 C.F.R. Part 64 for the purpose of clarifying and ensuring state-enforceability. The affected conditions are 4.1.15., 4.4.4., 4.4.5., 4.4.6., 4.5.1., 5.1.11., 5.4.12., 5.4.13., 5.4.14., 5.5.2., 6.1.2., 6.1.3., 6.4.3., 6.4.4., 6.4.5., and 6.5.2.
- c. The non-applicability determination given below is written in permit section 3.7.2.a.

VI. **Permittee Comments on pre-draft permit.** The writer solicited comments from the company concerning the changes in the pre-draft permit, which the permittee submitted on 1/16/2013 via email to the writer. The comments are as follows:

We believe that there are inaccuracies in the draft modified Title V, resulting from adding the new q-rock product load-out equipment (two bucket elevators, dust suppression hopper load-out) as a revision to an older construction permit No. R13-2145B instead of a separate new permit.

The equipment previously covered under permit R13-2145B was a screening system consisting of five rotex screens and dust control cartridge collector #36. The new modified equipment is the q-rock product load out equipment, which can be operated completely independent from the screening system and will have no effect on the rotex screens and cartridge collector #36: as such the rotex screens and collector #36 have not been modified. However, the modified Title V permit draft has erroneously included changes pertaining to the rotex screens and collector #36.

Therefore, we are requesting that any change to language related to the rotex screens and stack #36 be deleted from the new modified Title V. A summary of our comments is below. Also attached is a copy of the modified draft with our comments inserted in red and blue text.

In summary

- Page 7 delete the control devices Collectors #6 and #36 from the emission unit column in the table. These are control devices, not emission units.
- Page 31 3.7.2 The five rotex screens and stack #36 have not been modified and should not be included in this paragraph.
- Page 44 5.1.7.2 (c) and (d) The stack emission rate should remain at 0.022 grains per dry standard cubic foot from stack #36 since this system was not modified and was incorrectly linked to the current project. The reference to the opacity standard is not necessary also.

Response

This writer reviewed the electronic copy of the pre-draft permit with the permittee’s comments and also noted a suggested change to boilerplate condition 3.3.1.d.

As stated above in Section I. of this Fact Sheet, the language of conditions A.1. through A.5. of R13-2145B was replaced by the requirements of 4.1.1. and 4.1.2. of R13-2145C. Thus, the requirements of R13-2145B have been removed, and the requirements of R13-2145C have been written in the modified Title V permit. Also, permit R13-2145B has been superseded by permit R13-2145C, which is stated at

the top of page 2 in permit R13-2145C. If requirements for the unmodified rotex screens should remain in an NSR permit, then the permittee should take appropriate action to have them incorporated into the NSR permit, and then the Title V permit can be modified. For this permitting action, the applicable requirements of permit R13-2145C will be included in the modified Title V permit.

The change that will be made based on the permittee's comments is that the control devices will not be listed in permit subsection 1.1.

No change will be made to 5.1.7.2.(c) or (d) as they will remain as the requirements specified in permit R13-2145C, condition 4.1.2.

No change will be made to boilerplate condition 3.3.1.d.

No change will be made to the five rotex screens in 3.7.2.a. since requirements concerning them were modified in the underlying NSR permit.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

- a. **40 C.F.R. Part 64 Compliance Assurance Monitoring (CAM) for specific sources.** The bucket elevators (BE01 and BE02; Stack #6), DSH loadout spout (LS01; Stack #6), and five Rotex screens (SCREN 7-9,14-15; Stack #36) are subject to the applicable requirements of 40 C.F.R. 60 Subpart OOO, which was proposed by the Administrator after November 15, 1990. Therefore, the standards for particulate matter for the aforementioned sources are not subject to CAM in accordance with the exemption in 40 C.F.R. §64.2(b)(1)(i). The PM emission limit for the Trash Vibrating Screen TS1 (SCREN 16) in permit condition 5.1.6.1. was modified in minor modification MM01 issued on April 27, 2010. CAM applicability is not required to be addressed in minor modifications; but is addressed in significant modifications and renewals (cf. 40 C.F.R. §64.5(a)(2) and §64.5(b)). Therefore, Trash Vibrating Screen TS1 is addressed in significant modification SM01. Uncontrolled PTEs for PM and PM₁₀ from TS1 are 24.09 tpy and 8.38 tpy, respectively. Since the pre-control device potential emissions are less than the major source threshold, the Trash Vibrating Screen TS1 (SCREN 16) does not meet the applicability criterion at 40 C.F.R. §64.2(a)(3) and therefore is not subject to CAM.
- b. **Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule.** The facility has not made any changes that trigger a PSD modification; therefore, the requirements of the GHG tailoring rule are non-applicable.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: March 6, 2013
Ending Date: April 5, 2013

All written comments should be addressed to the following individual and office:

Denton B. McDerment, PE
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Denton B. McDerment, PE
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1221 • Fax: 304/926-0478

Response to Comments (Statement of Basis)

(Choose) Not applicable.

OR

Describe response to comments that are received and/or document any changes to the final permit from the draft/proposed permit.